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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,840	01/30/2004	Ferdinand Grog	Q78905	3851
23373	7590	12/14/2004	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			NGUYEN, CHAU N	
			ART UNIT	PAPER NUMBER
			2831	

DATE MAILED: 12/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/766,840

**Applicant(s)**

GROGL ET AL.

**Examiner**

Chau N Nguyen

**Art Unit**

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 8 and 11-15 is/are rejected.
- 7) ☒ Claim(s) 6, 9 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>1/30/04</u> . | 6) <input type="checkbox"/> Other: ____.  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 4, 7, 8, 12, and 13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 4 does not clearly recite the structure of the shield. Specifically, at first it recites "the shield comprising two layers of metal strips which are made as tubular hollow strands braided from wires and are subsequently pressed into metal strips". It also recites that "the inner metal strip is wound around the first foil... with a gap, while the outer metal strip is wound around the inner metal strip also with a gap staggered with respect to...the gap of the inner metal strip".

Claim 7, line 1, "at least two cores" is unclear to how these cores relate to the core recited earlier in claim 1.

Claim 7, line 1, "a first foil" is unclear to how this foil relates to the first foil recited in claim 1.

Claim 7, line 6, "the shield is placed over the second foil" is unclear.

Specifically, the shield (7) was recited to form around the first foil (6), see claim 1.

Claim 7 depends on claim 1 and further recites the same shield (7) placed over the second foil which surrounds the first foil. The position of the shield is unclear.

Claim 8 has similar problem as mentioned in claim 7 above.

Claim 12, line 1, "the foamed foils" lacks antecedent basis.

Claim 13, lines 1-2, "the two metal strips" is unclear to how these metal strips relate to the metal strip recited earlier in claim 1.

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-3, 11, 12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lawrenson (3,678,177) in view of Sackett (5,313,020).

Lawrenson discloses a data transmission cable comprising at least two insulated conductors twisted into a pair (2), in which the pair is enclosed by an electric shield (8) which is surrounded by a jacket (10) made of an insulating

material, characterized in that the two conductors which are insulated by a solid unfoamed material (3) are twisted together with two strands (4) made of insulating material to form a core, the core being enclosed by a first foil (6,7), the shield (8) which is formed around the first foil comprises at least one metal strip made of an electrically well conducting material that is formed into closed tubular sleeve (re claim 1). Lawrenson does not disclose the strands and the first foil (6,7) being made of a foamed material. Sackett discloses a data transmission cable comprising insulated conductor and insulating strands in a core. Sackett discloses that the insulating material of the internal components of a core can be easily altered to meet the desired characteristics. For example, the insulating material could be solid to reduce the characteristic impedance of transmission or could be foam for increased characteristic impedance of transmission. Accordingly, it would have been obvious to one skilled in the art to use foamed insulating material for the strands and the first foil of Lawrenson to increase the characteristic impedance of transmission as taught by Sackett.

The modified cable of Lawrenson also discloses the metal strip being made of copper (re claim 2), the strands being made of polyethylene (re claim 11).

Noted that the modified cable of Lawrenson can be used for transmission rates of at least 100 Mbit/sec since it comprises structure and material as claimed (re claim

15). Re claim 3, it would have been obvious to one skilled in the art to use tin-plated copper for the metal strip of Lawrenson since tin-plated copper is well-known in the art for being used as electrical shielding material. Re claim 12, it would have been obvious to one skilled in the art to use PTFE for the first foil of Lawrenson since PTFE is well-known in the art for being used as insulating material because of its low dielectric constant and excellent flame retardancy.

5. Claims 4, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lawrenson in view of Sackett as applied to claim 1 above, and further in view of Clouet et al. (6,583,361).

Claims 4, 13 and 14 additionally recite that the inner metal strip is wound around the first foil with a gap while the outer metal strip is wound around the inner metal strip also with a gap staggered with respect to, and hereby covering, the gap of the inner metal strip, the strips are wound in the same direction and at the same angle. Clouet et al. discloses a cable comprising a shield (Figure 3) including an inner metal strip wound around an insulating layer with a gap, an outer metal strip wound around the inner metal strip also with a gap staggered with respect to, and hereby covering, the gap of the inner metal strip, the strips being wound in the same direction and at the same angle. It would have been obvious to

one skilled in the art to modify the shield of Lawrenson to have the shield as taught by Clouet et al. since the shield taught by Clouet et al. has a reliable structure.

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lawrenson in view of Sackett and Clouet et al. as applied to claim 4 above, and further in view of Mulrooney et al. (5,132,491).

Claim 5 additionally recites a stranding of tin-plated copper wires being placed over the outer metal strip with greater than or equal to 90% coverage. Mulrooney et al. discloses a cable comprising a stranding of wires being placed over a metal strip with greater than or equal to 90% coverage (Figure 8). It would have been obvious to one skilled in the art to provide a stranding of wires over the outer metal strip of Lawrenson with greater than or equal to 90% coverage as taught by Mulrooney et al. to improve the shielding effect in the cable.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lawrenson in view of Sackett as applied to claim 1 above, and further in view of Troxel et al. (6,310,286).

The modified cable of Lawrenson discloses the invention substantially as claimed including two of said cores as claimed in claim 1 being twisted together,

the cores being surrounded by a foil (6,7) and a shield (8). The modified cable of Lawrenson does not disclose at least two second foamed strands being twisted together with the cores. Troxel et al. discloses a cable comprising a plurality of cores (Figure 2) twisted together with a plurality of foamed strands. It would have been obvious to one skilled in the art to twist the foamed strands as taught by Troxel et al. with the cores (2) of Lawrenson to provide the cable with a round configuration.

***Allowable Subject Matter***

8. Claims 6, 9 and 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

9. Claim 8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not teach or suggest a cable comprising all the features as recited in the claims and in combination with the shield comprising three layers, with an inner metal strip that has a metal layer and an



insulating layer, an outer metal strip that is made of two metal layers and an insulating layer disposed therebetween, and a stranding made of tin-plated copper wires arranged over the outer metal strip with greater than or equal to 90% coverage, and the inner metal strip with the metal layer facing outward is wound around the first foil made of a foamed insulating material with a gap while the outer metal strip is wound around the inner metal strip also with a gap staggered with respect to, and thereby covering, the gap of the inner metal strip (re claim 6).

#### ***Cited Art***

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Gabriel et al. and Wodtke discloses cables having insulated conductors twisted with insulating strands.

#### ***Communication***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chau N Nguyen whose telephone number is 571-272-1980. The examiner can normally be reached on Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on 571-272-2800 ext 31.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Chau N Nguyen  
Primary Examiner  
Art Unit 2831